

IN THE CLAIMS

Please cancel claims 8, 16-17, 19-20, and 24-26.

Please amend claims 3, 9, 11, 12 and 46 as follows.

**This listing of the claims replaces all prior versions of the claims in the application.**

- 1-2. (Canceled).
3. (Currently amended) An isolated polynucleotide encoding ~~[[an]]~~ a ~~isolated~~ polypeptide selected from the group consisting of:
  - a) a polypeptide comprising an amino acid sequence of SEQ ID NO:2,
  - b) a polypeptide comprising ~~a naturally occurring~~ an amino acid sequence at least 90% identical to an amino acid sequence of SEQ ID NO:2, said polypeptide having thioredoxin activity,
  - c) a biologically active fragment of a polypeptide having an amino acid sequence of SEQ ID NO:2, said fragment having thioredoxin activity, and
  - d) an immunogenic fragment of a polypeptide having an amino acid sequence of SEQ ID NO:2, which may be used for the production of an antibody that binds to a polypeptide of SEQ ID NO:2.
4. (Previously amended) An isolated polynucleotide of claim 3 encoding a polypeptide comprising an amino acid sequence of SEQ ID NO:2.
5. (Original) An isolated polynucleotide of claim 4 comprising SEQ ID NO:4.
6. (Original) A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 3.
7. (Original) A cell transformed with a recombinant polynucleotide of claim 6.
8. (Canceled)
9. (Currently amended) A method of producing a polypeptide of claim 3, the method comprising:
  - a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim ~~[[1]]~~ 3, and
  - b) recovering the polypeptide so expressed.
10. (Canceled).

11. (Currently Amended) An isolated polynucleotide selected from the group consisting of:
  - a) a polynucleotide comprising a polynucleotide sequence of SEQ ID NO:4,
  - b) a polynucleotide comprising a ~~naturally occurring~~ polynucleotide sequence at least 90% identical to a polynucleotide sequence of SEQ ID NO:4, and which encodes a polypeptide having thioredoxin activity,
  - c) a polynucleotide complementary to a polynucleotide of a),
  - d) a polynucleotide complementary to a polynucleotide of b), and
  - e) an RNA equivalent of a)-d).
12. (Currently Amended) An isolated polynucleotide probe comprising at least 60 contiguous nucleotides of a polynucleotide of claim 11, and which may be used to detect the complete complement of a polynucleotide of claim 11.
13. (Withdrawn) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:
  - a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and
  - b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.
14. (Withdrawn) A method of claim 13, wherein the probe comprises at least 60 contiguous nucleotides.
15. (Withdrawn) A method of detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 11, the method comprising:
  - a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and
  - b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

16. (Withdrawn) A composition comprising a polypeptide of claim 1 and a pharmaceutically acceptable excipient.
17. (Withdrawn) A composition of claim 16, wherein the polypeptide has an amino acid sequence of SEQ ID NO:2.
- 18-26. (Canceled).
27. (Withdrawn) A method of screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a sequence of claim 5, the method comprising:
- a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,
  - b) detecting altered expression of the target polynucleotide, and
  - c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.
28. (Withdrawn) A method of assessing toxicity of a test compound, the method comprising:
- a) treating a biological sample containing nucleic acids with the test compound,
  - b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 11 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 11 or fragment thereof,
  - c) quantifying the amount of hybridization complex, and
  - d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.
- 29-45. (Canceled).
46. (Currently Amended) [[A]] An isolated polynucleotide of claim 11, comprising the polynucleotide sequence of SEQ ID NO:4.